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PROCESS COMPONENTS OF EFFECTIVENESS: A HOLISTIC STUDY OF 4 SECONDARY SCHOOL PRINCIPALS

Roslyn Moorhead

University of Western Ontario

William G. Nediger

University of Western Ontario

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ABSTRACT

An examination of the impact of principals' administrative styles on school climate and culture to explain the discrepancy between observed and quantitative analyses in principal evaluations is the purpose of this study. A 3-year study of four secondary school principals utilized qualitative methodology (observation and interviews) and quantitative survey analysis. Contradictory findings of the different methodologies indicate the inadequacy of a single methodology for evaluation research. A recommendation is made for inclusion of the concept of process and recognition of human needs in a definition of effectiveness. Several factors for effective schools include fit between system and school goals; choice of goals; fit of goals with student, staff, and parent needs; and goal implementation strategies. The choice of goals and their relatedness to student and teacher needs were found to be critical for principal success in implementing new programs. Six statistical tables and samples from a school profile inventory are included. (24 references) (LMI)

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Introduction

For the past two years we have carried out a holistic study of the leadership behaviours of four secondary school principals deemed by their peers or superiors to preside over successful schools. Both qualitative and quantitative data collection methods were used. In a preliminary analysis of our findings reported last year (Moorhead and Nediger, 1989) different pictures of the principals' effectiveness emerged, depending whether observational and interview, or questionnaire data were analyzed. The purpose of this paper is to explore the reasons for this discrepancy by examining in greater detail the climate and culture of each school and the impact of the principal on each. A secondary purpose is to illustrate the need for combined qualitative and quantitative methodologies, each of which sheds light on, but does not replicate, the results of the other. It also illustrates the pitfalls to be aware of when relying exclusively on one type of methodology.

The school effectiveness literature lists strong leadership as a factor in an effective school (Edmonds, 1979, 1981; Brookover et al.,1979; Lipham, 1981). Effective principals were goal-directed, set the tone for the school, provided strong instructional leadership, had good relations with staff, students and community, and utilized resources well. However, recent research throws some doubt on the strength of this link between the principal's leadership and school effectiveness (see Grady, Wayson and Zirkel, 1989 for a review of this research). School climate is also listed as an important factor in an effective school (Edmonds, 1981; Rutter et al., 1979; Pellicer et al., 1990); and the organizational culture is increasingly seen as important in the corporate as well as the educational world (Peters and Waterman, 1982; Hickman and Silva, 1984; Deal and Kennedy, 1982; Deal, 1985). School culture and climate are related but distinct entities. Precise definitions vary, but generally culture is a normative group phenomenon, defined by the shared values, norms and beliefs of the group, while climate focuses on individual perceptions of group behaviour and interpersonal interactions (Hoy and Miskel, 1987; Sergiovanni, 1987). Successful schools are thought to have a

flourishing and supportive culture and climate, and Sergiovanni (1987) lists cultural leadership as a key component of leadership.

Four secondary school principals, who were recommended by peers and superordinates as being effective principals, participated in the three year study. We used qualitative methods (observations and interviews) supplemented by quantitative survey results. Data were collected in the first year of the project (1987-88) by (1) job shadowing the principals for at least five complete working days; (2) conducting open-ended interviews with each principal to reflect on and clarify the observational data; (3) administering in the fall of 1987 Likert's "Profile of the School" (Likert, 1967) questionnaire to all teachers and a random sample of students and parents to measure the organizational climate of each school; (4) administering Lafferty's "Life Style Inventory", Levels 1 and 2, to obtain measurements of the principals' leadership styles and traits; and (5) collecting school statistical data on course grade distributions, student absenteeism, discipline problems and drop-out rate. In the second year, additional data were collected by (1) continuing job shadowing each principal for at least three complete working days; (2) conducting open-ended structured interviews with randomly selected students; (3) having a sample group of staff members complete Cooke's "Organizational Culture Inventory" (Cooke and Lafferty, 1983, 1986) as a measure of school culture; (4) administering in May '89 the "Profile of the School" questionnaire to staff; (5) administering open-ended questionnaires to a random group of teachers; and (6) administering the "Myers-Briggs Type Indicator" to each principal.

Leadership Styles of the Principals

Our observations and notes from shadowing yielded an initial impression of each person's leadership style, which was confirmed by subsequent observations in the second and third years, and the Myers-Briggs results. Because these observational data gave us one perspective of the school's success, and other data a different viewpoint, we will include a thumbnail sketch of each principal's leadership style.

Principal 1 was a forthright and vocal proponent of program and policy initiatives (such as the enhancement of the resource centre role) and the well-being of the students. He frequently and clearly articulated his educational values and his vision for the school, not only to staff but also to students. He volunteered to work on educational committees dealing with issues in which he strongly believed (co-operative education, the teacher-librarians group, athletic council) and worked long hours to ensure the success of these programs. In the second and third years of the project, he continued to work on the same areas: expanding the role of the resource centre, enhancing the co-operative education program, student activities and student leadership. He added one new area, invitational schooling, which became the focus of a long-term professional development thrust. On the Myers-Briggs scale he was type ENTJ--an extrovert, intuitive, thinker, judge (prefers to come to conclusion). NT managers (like Principal 1) are theoretically described as visionary leaders who like to focus on the mission and systems of the organization. They have a great ability to build conceptual frameworks, develop prototype models or pilot programs, and plan approaches to change; they believe strongly that an organization must grow and develop. They tend to value competence, intelligence and principles.

Principal 2 was committed to her vision for the school, providing a valid education--not babysitting--for basic and general level students, and she spent considerable thought and energy fostering that vision. Time was spent in ensuring an invitational atmosphere for learning, in developing a co-operative education program to serve the needs of basic level students, and in monitoring teaching and evaluation techniques to ensure they corresponded to the philosophy of the school. She also regularly toured the school and spent time fostering good student and staff relations, and discipline and attendance policies were formulated in light of an invitational learning philosophy. In the second year, she pursued the same goals, but with greater urgency; there had been a turnover in teaching staff, and the newcomers were not committed to or aware of those goals. On the Myers-Briggs scale she was type INTP--an introvert, intuitive, thinker, perceiver (prefers to remain open). Like Principal 1, she too was an NT manager and shared many of the same qualities.

Principal 3 was an extrovert, friendly, sociable and enthusiastic. He spent time touring the school, talking to students and staff; he knew the majority of the student body by name and regularly invited students into his office to talk about the school. He was the greatest innovator of the four in terms of major new initiatives undertaken each year: in the first year of the project we observed four major policy or programmatic thrusts and innovations: revising the general level program (including evaluation techniques and an emphasis on different learning styles), developing a school philosophy and the consequent expectations of teachers, developing a long-range computer plan, and revising the attendance/lates policy for the school. A lack of follow-up was observed in year 2 of the project. He abandoned actively pursuing those four goals and concentrated on improving discipline, planning for the introduction of a more flexible timetable and alternative school year schedule, and preparing for the introduction of a French immersion program. He was intellectually curious and spent considerable time reading professional literature. He also dedicated a significant fraction of his time to outside commitments: organizing provincial or international conferences, giving workshops or being a leader at principals' courses. He was type ENFP on the Myers-Briggs scale, an extrovert, intuitive, feeling, perceiver. NF managers are described as focusing on the growth needs of an organization, of making decisions by participation, and being personal, insightful and charismatic. An NF manager believes that people's potential forms the strength of an organization and that motivated workers equal high productivity.

Principal 4 exemplified the 'principal as administrator' archetype. He enjoyed administrative details and was very highly organized: he was a compulsive record keeper and in his own words, "documented everything to death" (usually in triplicate): for example, student attendance, staff attendance at department and staff meetings, and winners of graduation awards. He did not have any desire to initiate new programs, and indeed spoke of himself as "not an initiator." In his years as principal, he could remember only one innovation he was involved with--introducing a computer for administrative purposes--and that was done after every other school in the county had already done so, in order to learn from their experiences. He had a passion for order and control, and ran a very

strictly disciplined school. However, he enjoyed and was very good at counselling students, and he spent part of his time helping the guidance department in that respect. He also religiously stood at the office counter each morning, greeting staff and students and giving them the opportunity to inform him of any problems or needs they had, which he attended to immediately. On the Myers-Briggs, he came out as an ISTJ, an introvert, sensor, thinker, judge. An SJ manager is described as the traditionalist, the stabilizer, the consolidator. They tend to focus on the hierarchy of the organization and have strengths in the establishment of policies, rules and schedules, of being patient, thorough, steady and reliable. They value caution, carefulness and accuracy of work. As with the other principals, the theoretical profile matched our observations.

If we had ranked these ranked these principals only on the basis of this observational data, and our interviews with them, we would have asserted that Principal 3 was the most successful and Principal 4 the least, with the other two somewhere in between. Principal 3 was friendly and enthusiastic, even charismatic; he believed strongly and sincerely in the need to empower others and tried to follow a participative collegial model of governance, and he was well-informed about current educational issues and eager to implement programs for school improvement. Principal 4, at the other extreme, was conservative in outlook and took a 'wait and see' attitude towards current educational ideas; he enjoyed the task of administering the school and spent much of his time on managerial detail; he did not articulate any exciting new vision, and while certainly not inimical to individual growth, he did not actively facilitate or try to foster it. However, as reported last year (Moorhead and Nediger, 1989) the quantitative survey results and the school statistical data where available contradicted this conclusion. Principal 4 (and Principal 1) were rated significantly more effective by their staff members and students than Principal 3 (or Principal 2). Consequently, we slightly altered the emphasis of the study in the second year to look more closely at the schools' culture and climate in an effort to understand the seeming disparity of the results.

Mapping the Schools' Culture

As mentioned before, school culture and climate are related but distinct entities. Culture is defined by the shared values, norms and assumptions, while climate is defined by the perceptions of group behaviour and interpersonal interactions. There have been many specific definitions: Ouchi (1981) defined it as, "A set of symbols, ceremonies and myths that communicate the underlying values and beliefs of the organization to its employees." Martin and Siehl (1980) described it as: "Glue that holds together an organization through shared patterns of meaning. Three component systems: context or core values, forms (process of communication, e.g., jargon), strategies to reinforce content (e.g., rewards, training programs)." Swartz and Jordan (1980) said it was a "Pattern of beliefs and expectations shared by members that produce norms shaping behaviour." Sergiovanni [1987] says that culture includes values, symbols, beliefs and shared meanings; it governs how members should think, feel and behave: "Key for the concept of culture is the importance of collective ideology, shared values and sentiments, and norms that define acceptable behaviour." The common factor in all of these definitions of organizational culture is reference to a system of ideology, values, laws, and day-to-day ritual. To develop a profile of each school's culture we used three different measures: the Organizational Culture Inventory (OCI) (Cooke and Lafferty, 1983, 1986), questionnaire and interview data from both teachers and students, and observational data.

OCI Results: The OCI focuses on behaviourial norms and expectations, rather than shared beliefs and values. It measures the extent to which organizational members believe they are **expected** to think and behave (rather than the way they do think and behave) in 12 different thinking or behaviourial dimensions. Four of the styles--achievement, self-actualizing, humanistic-helpful, and affiliative--represent satisfaction needs, or an Achieving/Humanistic Orientation (Nediger and Chelladurai, 1989) and are considered to be constructive styles. The other eight represent security needs and are less constructive styles. Four of these (approval, conventional, dependence and avoidance) represent people/security needs, or a Dependent/Submissive Orientation, and are the defensive styles; the other four (oppositional, power, competitive, and perfectionistic) represent task/security needs, or a

Dominant/Competitive Orientation, and are the aggressive styles. An ideal profile is given in Figure 1; the greater extensions are in the satisfaction styles; the other styles extensions are below the 50th percentile range.

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For each school twelve staff members, mostly teachers with varying years of experience and subject expertise but including the principal and at least one support staff member, filled out the questionnaire. Responses were averaged and then plotted on a normed circumplex graph like that in Figure 1 to obtain percentile rankings for each style. The percentile scores for each school are given in Table 1.

TABLE 1
Percentile Rankings on OCI

OCI STYLE	SCHOOL 1	SCHOOL 2	SCHOOL 3	SCHOOL 4
Achievement	65	70	82	50
Self-Actualizing	65	70	78	45
Humanistic/Helpful	73	85	90	62
Affiliative	75	85	82	62
Approval	30	40	45	52
Conventional	15	40	20	62
Dependent	20	45	18	45
Avoidance	25	35	15	40
Oppositional	22	55	25	50
Power	25	35	15	45
Competitive	30	30	18	38
Perfectionistic	20	38	20	40

In School 1, the dominant styles were humanistic-helpful and affiliative, closely followed by achievement and self-actualization. The dependent areas were all quite low, 30th percentile at the highest. School 2 was strong in humanistic-helpful and affiliative areas; lower, but still strong, in achievement and self-actualizing. The next strongest area was oppositional; all other areas scored below the 50th percentile. School 3, like school 2, was strongest in humanistic-helpful style and affiliative styles; lower but still strong in achievement, self-actualizing. All the remaining areas scored below the 50th percentile. School 3 had the ideal profile; School 2's scores in the security areas were slightly higher, indicating a more defensive culture. School 1's profile was also a strong one, although the percentile rankings for the satisfaction areas were depressed compared to the Schools 2 and 3. Unlike the others, school 4 did not have extreme high and low scores: it had a rather flat profile, in which all areas ranged from the 40th to 60th percentile. Humanistic-helpful, affiliative, and conventional styles had the highest scores; approval, dependent, oppositional and achievement styles were at or just above 50th percentile. The only similarity between its profile and the other schools' were that two of strongest areas were humanistic-helpful and affiliative. The profile is typical of an organization led by an 'SJ' manager who prefers a controlled, hierarchial order. In all cases, the rankings confirmed our observations, particularly the more traditional and authoritarian nature of School 4. In all schools there were strong humanistic expectations to help and support other members.

Teacher Questionnaire/Interview Data on Culture:

For Schools 1, 3 and 4, a group of 12 staff members chosen by the vice principal to represent different years of experience, subject departments, gender, and responsibilities were given a 19 item qualitative questionnaire to complete. All questionnaires were answered anonymously and returned to the researchers in sealed envelopes. The return rate was high in spite of the busy time of year (May/June '89); ten people responded in School 1, and 12 in Schools 3 and 4. The principal of School 2 asked that the teachers be interviewed, rather than given a questionnaire. Consequently, in School

2 we asked precisely the same questions as on the written questionnaire, worded the same way, in a taped interview format. Unfortunately, because of time restrictions, we could only interview five staff members. The complete questionnaire is given in Appendix A, and the list of questions dealing with culture are given in Exhibit 1.

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Exhibit 1

TEACHER INTERVIEWS: CULTURE

Q11. To what degree does tradition play a role in the development of policy and practice in the school? Is this a constraint?

Q12. How is this school unique from the point of view of ethos and tradition?

Q13. What part does the principal play in developing and maintaining this?

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Clear distinctions between the schools emerged. In School 1 there was no consensus from the staff on the school's ethos. Everyone listed something different, but all agreed that the principal was active encourager of what they saw as strong points of school. Tradition did not play a major role, a finding we would have predicted from our observations. Principal 1 was highly self-actualized and willing to overthrow any previous rule or program if he felt doing so would be beneficial to the students. School 2 was a new school, so the staff could not speak of traditions. However, they did feel the school had a definite ethos; they saw the school as being unique in terms of its commitment to basic level education and its support for basic level (vocational) students. The principal was seen as playing a caring but essentially supportive role, rather than an active one, in maintaining this commitment. School 3 staff described their school as being supportive and friendly; many felt that its small size was important. This impression was confirmed by the principal in one of our interviews: speaking of the school's ethos, he said, "To a large extent, it matches with my philosophical position...The school here is less formal [than my previous school]; it is less structured. They are willing to try new things. It did need some changes [such as] a cyclic evaluation plan." He added, "I fit well into the school and the community." Like the principal, the staff felt he "fit in" with school's tradition or that he built

on it. And also like School 2, the staff felt his role was essentially a supportive one. There was no consensus on the role of tradition: a plurality felt it played a large role, a small number that it played a minimal role, and the rest were unsure. There was no doubt about the role of tradition at School 4: a vast majority of staff described it as conservative or traditional. All the respondents felt the principal played a large role in maintaining this ethos. Practically all staff felt tradition played a large role in school policies, but only one person saw this as a constraint.

Student Interview Data on Culture:

A randomly selected group of students representing different programs, ages and gender were interviewed at each school. The interview was a qualitative one; it was tape recorded (with one exception--one student requested that notes be taken rather a tape recorder used) and took a minimum of 30 minutes. A small number of interviews were lost because of recording problems; we obtained interview transcripts from 20 students at School 1, 8 students at School 2, 18 at School 3, and 15 at School 4. Fewer students were interviewed at School 2 because of time restrictions. The specific questions relating to culture are given in Exhibit 2. A summary of the responses is as follows.

The students at School 1 described it as a friendly school, well-rounded (its academic and music programs were cited as being above average) but especially known for its athletics. They described the rules as fair, basic, and not too numerous. Attendance, smoking, and rules re conduct in hallways and the cafeteria were cited as the most important. Two-thirds of the students said it was the number one school in the city; 5 felt it was a good school. In school 2 one-half of the interviewed students described it as friendly; one-half as having a mixture of groups. All students felt its community reputation was bad, although one student said its reputation was improving. There was no consensus on rules and regulations: one-half of the students felt there weren't many; one-half felt there were. Rules about smoking and prohibition of drugs were perceived as being the most important; one-half of students also mentioned no skipping or no swearing. All the students felt the school was great or good, and that their teachers were friendly and would give extra help if needed.

Exhibit 2

ANALYSIS-STUDENT INTERVIEWS: SCHOOL CULTURE

Q8: Some schools are described as preppy; others as friendly, etc. Briefly, how would you describe this school? What is its reputation in the community?

Q9: Are there many rules and regulations? What are the most important ones?

Q10: How would you rate this school compared to other schools you know about?

Q11: Are your teachers friendly? Are they involved in school activities? What support do they give you when you need help?

The majority of the students interviewed at School 3 described it as being friendly or a good school. A minority said it was snobby, and one student described it as a "dive". The majority of the students said its reputation in the community was good; a minority said it was known for drugs and violence. Student opinion was divided over the number of rules and regulations; the majority said there were just the normal ones. However, there was no consensus on which were the most important: attendance, smoking and drinking rules were mentioned the most often (but by only a minority of the students.) At School 4, the majority of students described it as a good or friendly school. Five described it as a clean school. All students said it was highly respected in the community. The majority of students felt there were a lot of rules and regulations; the rest said there were some, but not too many. The rules most frequently mentioned were quiet and orderliness, no drinking or drugs, and attendance. Over two-thirds of the students said there school was very good or the best; the rest that it was a good school. All students felt the teachers were friendly and gave extra help when needed and that support was readily available.

Observational/Interview data on culture:

The definitions of culture mention ceremonies and rituals as one manifestation of the shared values and beliefs which constitute the culture. In the course of our shadowing, we observed the rituals unique to each school, and occasionally they would be mentioned in the interviews or questionnaires. School 1 and School 4 had the strongest, most viable rituals; the rituals in Schools 2 and 3 did not generate the enthusiasm or engage as many people as in the former, and were rarely mentioned in the interviews.

In School 1, almost all the students mentioned the school's community service day, an annual event for which students and teachers did volunteer jobs in the community (cutting a senior citizen's lawn, picking up garbage in a park, etc.) Most also mentioned the homecoming (a two day celebration of the school's 25th anniversary, which had involved the spirited participation of the majority of the school community), pep rallies, and MOGA (Most Outrageous Group Activity) Madness, for which school was a national winner. The teachers also mentioned the community service day, homecoming, and the school athletic games. Both students and teachers mentioned that the principal attended all the games, concerts and other student activities, thus enhancing their significance. Principal 1 arranged to find and display formal portraits of student award winners for each year, and in consultation with both staff and students, he established an award named after a popular and respected teacher who unexpectedly died. It was consistent with this respect for historical roots that in his new school (1989-90), he immediately arranged for missing portraits of past principals of the school to be hung in the front hallway.

School 2, as a new school, had to develop rituals. The monthly "Lump of learning" award, given to a staff member for a crazy thing done the preceding month, was established. A few months later, a more serious 'teacher of the month' award was set up by the staff. The principal kept a jar of candies was kept on her desk; both students and staff were free to come and get one, and did so.

We observed fewer rituals in school 3. Birthday celebrations were the most obvious. The principal in the second year of the study had a daily gathering of students who were having a

birthday, giving them juice and muffins and chatting with them about their likes and dislikes and changes they would like to see implemented in the school. A typical 'student birthday ' meeting would have five or six students from all grades and last about 15 minutes. The principal gave roses to female staff members on their birthdays, and birthday cards for all staff, and he served tea in his office for new custodial staff. Spirit days were held (dressing up at Halloween, tricycle races in the spring) but those we observed did not generate the enthusiasm we observed at School 1 rallies. Moreover, students did not mention these rituals in their interviews, while almost every student interviewed in School 1 mentioned the equivalent rituals.

A regular ritual at School 4 were the all-school assemblies held every other Monday. Usually there wasn't a special speaker; rather, an assembly was held in lieu of morning announcements over the PA and was designed both to foster a feeling of being a member of a school family and to teach group courtesy. In both of these goals he was successful; the majority of the students mentioned the assemblies and the "family" feeling in the school. Principal 4 also made a ritual of standing in the hallway during activity period and at the school office counter in morning. Both staff and students knew he was available then and would seek him out with their problems and ideas. Again, this was a more powerful custom than we initially realizes. The staff and students depended on the support and help being so readily available at that time.

Summary of Data on Culture:

There was no consensus in School 1 on the ethos or spirit of the school, but unanimity that the principal was a powerful force and role model in developing each teacher's vision of the school. The school was clearly an innovative one, where every tradition could be challenged. There were strong expectations in the achievement-oriented styles, a balance between demands and rules, and a strong school spirit, partially engendered by rituals and special days.

School 2 was building its traditions. There was a strong commitment to basic level students and their education, but there was also some anxiety in regard to norms and expectations, although the

school was humanistically, achievement oriented. The principal was seen as accommodating these beliefs, rather than shaping them. The students had mixed feelings. They were uneasy about the lack of community acceptance, although they were personally happy at the school, and they had no consensus of opinion about the rules and regulations.

School 3 had a strong traditional ethos of being a warm, friendly, informal school. Tradition played a role. Again, the principal was seen as "fitting in" rather than shaping the culture. Some of the students believed that the school was fighting an unfair reputation of being a druggie school. Like School 2, they had no consensus regarding the importance of rules and regulations. There were no strong rituals, except the student birthdays.

School 4 was hierarchial, conservative and traditional, and definitely not innovative. It was a highly regulated, controlled school. There was strong student (and staff) consensus in regard to rules and regulations. Monday morning assemblies were a ritual, as was the principal's routine of being available at a certain place and time each day.

Mapping the Schools' Climate

The organizational culture reflects the shared values and beliefs of its members (such as what the school stands for) and the behaviourial norms and expectations resulting from those beliefs. Climate is a closely related concept; rather than focusing on the beliefs or behaviourial expectations it is a description of the actual interpersonal behaviours and attitudes of staff members. Culture can be compared to the soil and seeds; indeed, the word originally was derived from the "idea of cultivation, the process of tilling and developing land," (Morgan, 1986) and climate to the resulting blooms and fruit. Elements of climate include principal leadership, warmth and support among teachers, task orientation, sense of purpose, and number of responsibilities teachers assumed. (Sergiovanni, 1987).

Each school's climate was profiled, using Likert's "Profile of the School" (POS) and selected questions from the student and teacher interviews. The POS results are given in Tables 2, 3,4, and

5. In order to interpret the results, it should be noted that an eight point scale is used for answering each item, and the index scores for each school are interpreted in terms of the System 1 to 4 model. A system 1 organization represents an exploitive authoritarian model and system 4 a collegial, participative one. (Likert, 1967). If the score is 1.0 to 2.0, the pattern is system 1 (exploitative, authoritarian); 3.0 to 4.0, system 2 (benevolent authoritarian); 5.0 to 6.0, system 3 (consultative); and 7.0 to 8.0, system 4 (participative group model). Scores that fall in intermediate areas, such as 2.0 to 3.0, represent a transitional system with characteristics of the types on either side.

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Insert Tables 2-5 here
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The POS teacher results indicate that both School 1 and School 4 are moving into the transition range from a type 3 system to type 4. School 1 had only 4 areas in the 4.0 to 5.0 range, and 8 areas for which the scores were greater than 6.0. School 4 was similar; there were 7 areas scoring greater than 6.0, 5 in the 5.0 to 5.9 range. However, there were slightly more areas scoring below 5.0, including 3 which were below 4.0.

Schools 2 and 3, by contrast, are in transition from a system 2 (benevolent authoritarian) to system 3 (consultative) organization. School 2 had three areas which scored less than 4.0 and seven areas which scored between 4.0 and 5.0, including the summary indices for Principal Leadership and Climate. All the principal indices for School 3 were in the 4.0 to 5.0 range; 11 areas in total scored at less than 5.0. Eleven areas were in the 5.0 to 6.0 range. Hence Schools 2 and 3 ranked a magnitude lower on principal leadership and climate criteria, and only rarely accorded a score greater than 6.0 to any area.

Teacher Questionnaire/Interview Data on Climate:

A summary of the responses to questions relating to the school's climate are given below. A list of the questions about school climate are given in Exhibit 3.

Exhibit 3

TEACHER INTERVIEWS ANALYSIS: CLIMATE

Q7. How would you describe the working relationship within your department? within the entire staff?

Q8. To what extent has the principal had an impact on these relationships?

Q14. To what extent does the principal value the well-being of the school employees?

Q15. To what extent does the principal value an atmosphere encouraging you to stretch and grow? Encourage your career growth?

Q19. What are the joys and sorrows of working in this school?

In all of the schools, working relationships within individual departments were described as very good. At School 1, seven of the ten respondents even said they were "excellent"; School 2 respondents said very good to excellent; in School 3, three-quarters of the respondents said they were "excellent." School 4 said "very good." Describing working relationships within the entire staff, there was greater disparity between the schools. The consensus at School 1 was that they were very good; at school 2, three of the five respondents said very good, but two felt they were merely "okay." In school 3, there was also a not so positive note about the working relationships; a plurality (five respondents) said good, the rest "so-so" or "not so good." School 4 respondents were very positive, 75% of the respondents saying that they were "very good" and the rest saying "good."

There were differences of opinion on the principal's impact in these relationships. In School 1, 80% said the principal had a major influence, and spoke of his role modelling. The remainder said "not much", although one qualified this with the statement, "Our department would have functioned this way anyway, but it is great to have a supportive principal." In School 2, three of the respondents indicated the principal had an impact, but two were vague as to how much or how global this impact was. For example, one talked about her support of the professional development committee; one said she didn't try "to polarize one department against another," but went on to say, "the head structure

here, too, has a lot to do with it [working relationships within entire staff]." Two people said the influence was minimal: "Based on what I've experienced, not an awful lot...when she is around she is very friendly." In school 3 half the respondents said the principal had "little" or "very little" impact; three said "considerable" impact, and the rest made ambiguous comments, e.g., "For some of us, [his] positive outgoing attitude provides comfort, enrichment and encouragement. Some, however, feel threatened, it seems, and resent the energy and enthusiasm he exudes," and "[His] jovial nature has served to "lighten up" the staff to a certain extent. However, his absenteeism during school hours is cause for concern." This latter comment on the principal's absence from the school surfaced a number of times, with a negative connotation, in both the School 2 and School 3 teacher questionnaires. In School 4, by contrast, all but two respondents said principal 4 had considerable impact, e.g., "By example, he sets the tone of co-operation and dealing sensibly with issues." Two people minimized his contribution, "Some, but not a lot."

For all the schools, the responses to Q14, "To what extent does the principal value the well being of school employees?" were positive: each principal was perceived as being a caring, supportive person. However, replies varied about the extent to which the principal encouraged personal and professional growth (Q15). Principals of schools 1,2, and 3 were perceived as being highly encouraging. In School 4, however, a minority (three respondents) felt the principal was highly encouraging. Five either said he doesn't ("I think he is neutral in this regard,") or somewhat: "Somewhat--he probably thinks we'll all just do our bit and get on with our development."

When asked to name the joys and sorrows of working at their school, a large number of respondents at each school listed friendly, pleasant staff relationships as one of the joys. Other joys were unique to each school, however. In school 1, fully two-thirds of the respondents listed some variation on professional rewards: "Being trusted to do my job professionally without needless scrutiny"; "I have the freedom to continue to innovate and develop my own program and I know I have support from the administration"; "Programs and people encouraged to grow and develop." At School 2, the emphasis (from all respondents) was definitely on the joys of teaching the students. For

example, "Oh, I have so many when I see a kid who was bum three years ago, nicely dressed and has a job. This is just super," and "You get to work with students, every day is different and you are challenged yourself." In School 3, the emphasis was solely on the friendliness of the school, and there wasn't any agreement on other joys. In School 4 the supportive administration was mentioned by a majority: "The supportive administration who play by the rules, but also know when to bend"; "Strong support from principal"; "It is very nice to work in a school that is well run and respected in the community"; "Boundaries, limits, goals, aims and objectives are always crystal clear."

There was no consensus on sorrows by the respondents from either Schools 1 and 4. The plurality (three respondents) from both Schools 1 and 4 listed the principals' leaving as their only sorrow. Four of the respondents from School 2 said their sorrow was not reaching a student, of failing a student, which corresponded to their articulated joys of teaching a student and seeing one of their students be successful. In School 3, there was no majority view, but almost half (five respondents) cited apathy and lack of motivation on the part of both students and teachers as a sorrow, e.g., "In recent years an apathy has developed in both students and staff." Three respondents complained of too many demands on staff, "Too many reports" and "Our staff [because it is small] is always taxed to be creative," and two respondents were upset by educational practices: "Blind adherence to faulty logic and miseducative practices. Lack of a sense of direction."

Summary of Data on Climate

In Schools 1 and 4, the principals were perceived by the staff as holding high goals, as being excellent educators, and of providing a great deal of support for their staffs. The staff interviews confirmed that working relationships both within departments and in the school as a whole were excellent. The primary differences emerged on the question of encouraging individual professional growth. Principal 1 was revered for his active encouragement of individual growth, which was overwhelmingly seen as one of the joys of working in the school. In School 4, the Principal was seen

as benignly neglectful in this area; most staff members, in a somewhat defensive tone, said it really wasn't his responsibility to do so. In both schools the principal sorrow listed was their respective principal's leaving at the end of the school year. In Schools 2 and 3, the POS scores indicated decreased goal commitment, less effective open communication, and the principals were seen as less competent. Working relationships within departments were still very good, but within the school as a whole were not perceived as positively. Staff members felt each principal was caring and encouraged individual growth, but the joys of being in the school were focused on the intrinsic task of teaching in School 2 and the traditional friendliness of the school in School 3, rather than on anything the principals had influenced. Likewise for sorrows, School 2 focused on teaching disappointments, School 3 on apathy and lack of motivation.

Discussion

We had anticipated that schools with an innovative principal, who had a clear educational vision for his/her school, and who engaged in participative decision making, would be more successful than an authoritarian, bureaucratic principal. Some of our data supports this hypothesis. Principal 4 was rigid and authoritarian, not an innovator, who needed control over all aspects of the school. This authoritarian structure is reflected in the OCI results (high convention, power, competitive, oppositional scores), and the relevant POS questions, such as leadership style of the principal, where he was perceived of as authoritarian rather than collegial. However, other data indicated that on many levels it was a very successful school. The staff and students found him to be supportive and felt their school was the best in the county; the students achieved well, and had great respect for their principal. To our surprise, the staff in schools 2 and 3 rated the leadership and climate of their schools lower than that of School 4 in almost every respect, even though the principals there espoused a more open style of leadership, and the schools had strong OCI profiles. School 1 was the only one to combine high cultural rating and high climate ratings.

What is the cause of this discrepancy? Originally, we postulated that a hierarchy of needs existed, analogous to Maslow's hierarchy of individual developmental needs (Maslow, 1954), and that lower level needs had to be met successfully before higher order needs could be dealt with. Morgan (1986) supports the existence of such a hierarchy, using the metaphor of organization as an organism to describe the idea of integrating the needs of the individuals and organizations. Exhibit 4 is a chart, adapted from Morgan, giving examples of how a school can satisfy the varying psychological needs of its employees.

Exhibit 4

Type of Need	
Self actualising: .	Encouragement of complete employee commitment. The job is major expression of employee's life.
Ego: .	Scope for achievement, autonomy, responsibility, and personal control. . Work that enhances personal identity. . Feedback and recognition for good performance.
Social: .	Professional interaction with colleagues . Office social outings
Security: .	Dependable and safe working conditions . Pleasant and orderly work environment

Examples of how schools can satisfy needs at different levels of Maslow's hierarchy.
(Adapted from Morgan for schools as organizations)

We tested this idea by regrouping specific questions from the POS staff questionnaire to focus on each of the developmental need levels as defined in Exhibit 4. The specific items for each type of need are listed in Exhibit 5. Results giving the average score for each school for each category are

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Insert Exhibit 5 about here

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shown in Table 6.

As can be seen, both Schools 1 and 4 have significantly higher averages for the security level needs; however, School 4 had the lowest score at the self-actualization level. This is confirmed by our observational data, the OCI data and the interviews. Schools 2 and 3 have low scores for the security

Table 6
Average POS Scores by Type of Need

TYPE OF NEED	SCHOOL 1	SCHOOL 2	SCHOOL 3	SCHOOL 4
Self-Actualization	5.70	5.59	5.27	5.05
Ego/Achievement	5.42	4.81	5.13	5.23
Social	5.75	5.50	5.57	5.61
Security	6.01	5.03	5.02	6.18

and ego/achievement needs, so that their higher scores for self-actualization needs are relatively ineffective. Again, this result was confirmed by the observational and interview data. Although both principals 2 and 3 were innovative and concerned with program and staff issues, their staffs were relatively unresponsive and at times felt threatened by the principals' philosophies. Moreover, as revealed in the interviews, the staffs of these schools resented their principal's frequent absence for system or other professional commitments. Principal 4, contrary wise, was rarely absent from the school, and he was always available to answer questions and help with problems. Principal 1 was able to communicate successfully his philosophy of openness and availability: both staff and students referred to this policy in their interviews or questionnaires. In School 1 the principal not only met the security needs, but also the higher level needs of his staff, which enabled his innovative thrusts to be more successful than those of Schools 2 and 3. Thus we have provisionally concluded that schools which meet the security needs of their staff for a comfortable and predictable environment tend to have a stronger climate, and are thus better able if there is visionary leadership to effect desired changes.

In conclusion, data from the various sources were sometimes contradictory; each gave a different perspective on the school and the impact of the principal. It was as if the observational data gave us a view from a window looking out one way; the survey data gave us a view from another window facing the opposite way; and the interview data gave us a still different glimpse from a third window, which encompassed part of both previous views. Thus our first conclusion is that any one methodology is insufficient to obtain an accurate picture of a school; a more holistic approach is needed.

Secondly, results from the teacher and student interviews, the organizational culture inventory, and the school climate questionnaire indicated that our initial hypothesis, that principals demonstrating a certain level of leadership skills would be more effective, was insufficient. In addition to a results oriented, or outcomes definition of effectiveness, we postulated the need for a complementary definition based on process. The data suggested that a culture with achievement/ humanistic oriented norms and expectations or energetic leadership committed to program improvement was not sufficient to ensure a high level of effectiveness. Furthermore, the analysis of the data from all sources led to the postulation of the existence of a "needs hierarchy" within a school, similar to Maslow's Hierarchy of Human Needs theory. Our data suggests that a principal must meet the lower level, security needs of all parties within the immediate environment before the higher order goals can be addressed successfully.

In our previous paper we said that several 'process' factors were necessary to ensure a successful school: the fit between system goals and school goals ($F(G_s,G_{sy})$), the choice of goals to emphasize and their match with the needs of students (N_s), staff (N_t) and the parents (N_p), and the strategies used in implementing those goals ($F(I)$). We conclude that the factors are not only valid, but the <u>choice</u> of goals particularly (N_s) and (N_t) are critical if the principal is to carry his followers with him or her in forging new programs.

Table 2

POS Scores in ascending numerical order

School 1: POS:

(Scores are averages of Year 1 and Year 3 results)

INDEX	SCORES: TEACHERS	HEADS
Teachers Scored 4.99 or less:		
CAUSAL: CLIMATE	5.11	5.12
Decision Process (levels and awareness)	4.70	4.42
Team Cooperation (Planning together)	4.61	4.68
Receptivity to Teachers Ideas	4.09	(5.46)
Decision Making (Participation in)	4.38	(5.84)
Teachers Scored 5.00 to 5.99:		
CAUSAL: TEACHERS'PERCEPTION	5.39	5.81
Goal Commitment (School wide)	5.98	(6.26)
CAUSAL: PRINCIPAL'S LEADERSHIP	5.48	(6.04)
Principal's Administrative Style	5.79	5.61
Team Building (Small group meetings)	4.97	(5.86)
Work Facilitation	5.67	(6.26)
Receptivity to Students' Ideas	4.96	(5.48)
Prin. Knows Teachers' Problems	5.93	5.65
Communication Flow	5.64	5.95
Goal Emphasis (Teachers')	5.09	5.43
Teachers Scored 6.00 or higher		
Support (by principal for staff)	6.36	6.68
Goal Emphasis (Principal's)	6.35	6.63
Competence	6.62	6.61
INTERVENING: TCHERS' PERCEPTION	6.06	6.13
Teachers' Openness with Prin.	6.55	6.34
Teachers' Support to Others	6.86	7.23
Teachers' Motivation	6.22	6.18
Work Satisfaction	6.02	6.36

Table 3

School 2: POS:

(Teacher scores are averages of Year 1 and Year 3 results; Head scores are Year 1 results.)

INDEX	SCORES: TEACHERS	HEADS
Teachers scored 4.99 or less:		
CAUSAL: Climate	4.76	(5.37)
Decision Process (levels and awareness)	4.40	(5.10)
Team Cooperation (Planning together)	4.45	(5.25)
CAUSAL: Principal's Leadership	4.40	(5.20)
Principal's Administrative Style	4.25	(5.67)
Receptivity to Teachers' Ideas	2.71	(5.25)
Team Building (Small group meetings)	3.9	4.40
Work Facilitation	4.66	4.70
Decision Making (Participation in)	4.59	(5.30)
Receptivity to Students' Ideas	2.89	4.55
Teachers Scored between 5.00 and 5.99:		
Goal Commitment (School-wide)	5.43	5.75
Support (by principal)	5.09	5.40
Goal Emphasis ((Principal's)	5.78	5.90
Competence	5.38	(6.22)
INTERVENING: Teachers' Perceptions	5.48	5.82
Teachers' Openness with Principal	5.23	5.82
Goal Emphasis (Teachers')	5.49	5.50
Work Satisfaction	5.83	(6.40)
Teachers Scored 6.00 or higher:		
Teachers' Support to Others	6.63	7.10
Teachers' Motivation	6.35	6.30

Table 4

School 3: POS:
(Scores are averages of Year 1 and Year 3 results)

INDEX	SCORES: TEACHERS	HEADS
Teachers Scored 4.99 or less		
CAUSAL--TEACHERS' PERCEPTION	4.80	(5.44)
CAUSAL--CLIMATE	4.65	(5.11)
Decision Process (levels and awareness)	4.66	(5.36)
Team Cooperation (planning together)	3.90	4.31
CAUSAL--PRINCIPAL'S LEADERSHIP	4.85	(5.55)
Receptivity to Teachers' Ideas	3.48	(5.59)
Work Facilitation	4.65	(5.08)
Decision Making (Participation in)	4.76	(6.48)
Receptivity to Students' Ideas	3.96	3.83
Principal Knows Teachers' Problems	4.44	4.96
Goal Emphasis (Teachers')	4.96	(5.28)
Teachers Scored 5.00 to 5.99 on:		
Goal Commitment (School-wide)	5.30	5.67
Principal's Administrative Style	5.58	5.91
Support (by principal)	5.36	(6.22)
Goal Emphasis (Principal's)	5.52	5.79
Team Building (Small group meetings)	5.11	5.19
Competence	5.08	5.64
INTERVENING--TCHERS' PERCEPTIONS	5.47	5.92
Teachers' Openness with Prin.	5.54	5.96
Communication Flow	5.54	5.83
Teachers' Motivation	5.95	(6.59)
Work Satisfaction	5.62	(6.30)
Teachers Scored as 6.00 or better:		
Teachers' Support to Others	6.39	6.84

Table 5

School 4, POS:

(Scores are averages of Year 1 and Year 3 results)

INDEX	SCORES: TEACHERS	HEADS
Teachers Scored 4.99 or less:		
Decision Process (levels and awareness)	4.93	(5.44)
Team cooperation (planning together)	4.63	4.69
CAUSAL: Principal's leadership	4.98	(5.29)
Principal's administrative style	3.38	3.79
Receptivity to teachers' ideas	3.87	4.82
Team building (small group meetings)	4.51	3.87
Decision making (participation in)	4.55	(5.87)
Receptivity to students' ideas	3.22	3.81
Teachers Scored 5.00 to 5.99:		
CAUSAL: Teachers' perception	5.06	5.34
CAUSAL: Climate	5.28	5.47
Goal emphasis (Principal's)	5.95	5.91
INTERVENING: Teachers' perception	5.87	5.96
Communication flow	5.43	5.58
Goal Emphasis (Teachers')	5.02	5.13
Teachers' motivation	5.90	5.93
Work satisfaction	5.64	(6.00)
Teachers Scored 6.00 or higher:		
Goal commitment (School-wide)	6.32	6.27
Support	6.03	6.16
Work facilitation	6.06	6.03
Competence	7.17	7.35
Teachers' openness with principal	6.16	6.34
Principal knows teachers' problems	6.02	6.29
Teachers' support to others	6.71	6.47

Exhibit 5
Questions from POS Corresponding with Different Level Needs

Security Needs:

Q44--To what extent does the principal make sure that planning and setting priorities to provide materials, equipment and space are done well?

Q66--How competent is the principal as an administrator?

Q24--How much confidence and trust do you have in the principal?

Q51--How well does the principal know the problems faced by the teachers?

Q61--How much does the principal try to help you with your problems?

Q67--How competent is the principal as an educator?

Q45--To what extent does the principal give you useful information and ideas?

Q83--To what extent does your department head make sure that planning and setting priorities are done well?

Q84--To what extent does your department head give you useful information and ideas?

Social Needs:

Q56--In your school, is it 'every man for himself' or do principals, teachers, and students work as a team?

Q57--How much do departments plan together and co-ordinate their efforts?

Q42--How often does the principal use small group meeting to solve school problems?

Q25--How free do you feel to talk to the principal about school matters?

Q26--How often do you try to be friendly and supportive to the principal?

Q27--How often do you try to be friendly and supportive to other teachers?

Q55--How much do teachers in your school encourage each other to do their best?

Q82--How often does your department head use departmental meeting to solve work problems?

Q87--How much interaction is there between the department head and teachers in your department?

Q89--To what extent does your department head involve you in major decisions related to your work?

Exhibit 5 (Continued)

Questions from POS Corresponding with Different Level Needs

Ego Needs:

Q28--How often does the principal seek and use your ideas about academic matters?

Q29--How often does your principal seek and use your ideas about non-academic matters?

Q46--To what extent are you encouraged to be innovative in developing effective and efficient educational practices?

Q58--Are decisions made at the best levels for effective performance?

Q60--To what extent are you involved in major decisions related to your work?

Q52--To what extent is communication open and candid between principal and teachers?

Q50--How accurate is upward communication to the principal?

Q30--In your job, is it worthwhile or a waste of time to do your best?

Q32--How much influence do the teachers have on what goes on in your school?

Q88--To what extent is communication open and candid between the department head and teachers in your department?

Self-Actualization Needs:

Q6--How often do you seek and use students' ideas about academic matters?

Q7--How often do you seek and use students' ideas about non-academic matters?

Q46--To what extent are encouraged to be innovative in developing effective and efficient educational practices?

Q71--To what extent do teachers feel responsible for seeing that educational excellence is achieved?

Q21--To what extent do you look forward to your teaching day?

Q47--How satisfying is your work at your school?

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